

**WHAT IS CLAIMED IS:**

1. A system for inspecting a substrate, the system comprising:  
an inspector having a sensor that inspects the substrate and produces a video  
stream, and a control interface adapted to send and receive a control  
stream,  
5 a network adapted to receive and transport the video stream and the control  
stream as two separate data streams, and  
a desktop for receiving the video stream and the control stream as two separate  
data streams, the desktop having a display adapted to present the video  
stream, and the desktop having user interface controls adapted to control  
10 operation of the inspector by use of the control stream across the network.
2. The system of claim 1, wherein the inspector is one of an optical inspection  
system, electron beam inspection system, electron beam review system, and  
optical review system.
3. The system of claim 1, wherein the substrate is a semiconductor wafer with  
integrated circuitry at least partially formed thereon.
4. The system of claim 1, wherein the substrate is a mask for use in patterning  
integrated circuits on a semiconductor wafer.
5. The system of claim 1, further comprising an additional video source adapted to  
selectively produce an additional video stream for receipt by the desktop, under  
control of the user interface controls on the desktop.
6. The system of claim 1, wherein the user interface on the desktop selectively sets  
characteristics of the video stream prior to delivery of the video stream from the  
sensor to the desktop.
7. The system of claim 1, further comprising a compressor adapted to selectively  
compress the video stream prior to delivery of the video stream from the sensor to  
the desktop.

8. The system of claim 1, further comprising a compressor adapted to selectively compress the video stream prior to delivery of the video stream from the sensor to the desktop, where the compressor compresses the video stream to a variable degree as specified through the user interface controls on the desktop.
9. The system of claim 1, further comprising a decimator adapted to selectively down sample the video stream prior to delivery of the video stream from the sensor to the desktop.
10. The system of claim 1, further comprising a decimator adapted to selectively down sample the video stream prior to delivery of the video stream from the sensor to the desktop, where the decimator down samples the video stream to a variable degree as specified through the user interface controls on the desktop.
11. The system of claim 1, further comprising a parser adapted to selectively crop the video stream prior to delivery of the video stream from the sensor to the desktop.
12. The system of claim 1, further comprising a parser adapted to selectively crop the video stream prior to delivery of the video stream from the sensor to the desktop, where the parser crops the video stream to a variable degree as specified through the user interface controls on the desktop.
13. The system of claim 1, further comprising a codec adapted to selectively set a frame rate of the video stream prior to delivery of the video stream from the sensor to the desktop.
14. The system of claim 1, further comprising a codec adapted to selectively set a frame rate of the video stream prior to delivery of the video stream from the sensor to the desktop, where the codec sets the frame rate of the video stream to a variable degree as specified through the user interface controls on the desktop.

15. A system for inspecting a substrate, the system comprising:  
an inspector having a sensor that inspects the substrate and produces a video stream, and a control interface adapted to send and receive a control stream,  
5 a network adapted to receive and transport the video stream and the control stream,  
a desktop for receiving the video stream and the control stream, the desktop having a display adapted to present the video stream, and the desktop having user interface controls adapted to control operation of the inspector  
10 by use of the control stream across the network,  
a compressor adapted to selectively compress the video stream prior to delivery of the video stream from the sensor to the desktop,  
a decimator adapted to selectively down sample the video stream prior to delivery of the video stream from the sensor to the desktop,  
15 a parser adapted to selectively crop the video stream prior to delivery of the video stream from the sensor to the desktop, and  
a codec adapted to selectively set a frame rate of the video stream prior to delivery of the video stream from the sensor to the desktop.
16. The system of claim 15, wherein the inspector is at least one of an optical inspection system, electron beam inspection system, electron beam review system, and optical review system.
17. The system of claim 15, wherein the substrate is one of a semiconductor wafer with integrated circuitry at least partially formed thereon and a mask for use in patterning integrated circuits on a semiconductor wafer.
18. The system of claim 15, wherein the decimator and the parser operate cooperatively to selectively down sample the video stream to a lesser degree when the video stream is selectively cropped to a higher degree, and to selectively down sample the video stream to a higher degree when the video stream is selectively  
5 cropped to a lesser degree.

19. The system of claim 15, further comprising an additional video source adapted to selectively produce an additional video stream for receipt by the desktop, under control of the user interface controls on the desktop.
20. A system for inspecting a substrate, the system comprising:  
an inspector having a sensor that inspects the substrate and produces a video stream, and a control interface adapted to send and receive a control stream,  
5 a network adapted to receive and transport the video stream and the control stream,  
a desktop for receiving the video stream and the control stream over the network, the desktop having a display adapted to present the video stream, and the desktop having user interface controls adapted to control operation of the  
10 inspector by use of the control stream across the network,  
a compressor adapted to selectively compress the video stream prior to delivery of the video stream from the sensor to the desktop, where the compressor compresses the video stream to a variable degree as specified through the user interface controls on the desktop,  
15 a decimator adapted to selectively down sample the video stream prior to delivery of the video stream from the sensor to the desktop, where the decimator down samples the video stream to a variable degree as specified through the user interface controls on the desktop,  
a parser adapted to selectively crop the video stream prior to delivery of the video  
20 stream from the sensor to the desktop, where the parser crops the video stream to a variable degree as specified through the user interface controls on the desktop, and  
a codec adapted to selectively set a frame rate of the video stream prior to delivery of the video stream from the sensor to the desktop, where the  
25 codec sets the frame rate of the video stream to a variable degree as specified through the user interface controls on the desktop,

where the compressor, decimator, parser, and frame grabber all reside within the inspector.